



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,173	04/19/2007	Akio Takamura	40163/00101 (NSCF-005US)	5064
30636 7590 08/29/2008 FAY KAPLUN & MARCIN, LLP 150 BROADWAY, SUITE 702 NEW YORK, NY 10038			EXAMINER KIRKLAND III, FREDDIE	
			ART UNIT 2855	PAPER NUMBER
			MAIL DATE 08/29/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/588,173	Applicant(s) TAKAMURA ET AL.	
	Examiner Freddie Kirkland III	Art Unit 2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/2/06 4/30/07 5/29/08</u> . | 6) <input type="checkbox"/> Other: _____ |

FIRST NON-FINAL ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-4, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Herbold et al. US Patent Application Publication 2004/0003646.

With respect to claim 1, Herbold teaches an elastic member (10) arranged in a power transmission channel and deforming in response to a torque to be measured; and torque detection means (26) for detecting the torque based on deformation of said elastic member, characterized in that it comprises: a torque member (18) for receiving the torque applied to said elastic member; and a load member (16) arranged separate from said torque member, for supporting a load of said elastic member, and wherein said elastic member is a flange-type member (figure 1), wherein said torque member and said load member are thin parts formed of said elastic member (figure 1), wherein said torque member has a direction of a surface of the thin part positioned parallel to a direction of torque, and wherein said load member has a direction of a thickness of the thin part positioned parallel to the direction of torque (paragraphs 19-28, figure 1).

With respect to claim 3, Herbold teaches an elastic member (10) arranged in a power transmission channel and deforming in response to a torque to be measured;

Art Unit: 2855

and torque detection means (26) for detecting the torque based on deformation of said elastic member; characterized in that it comprises: a torque member (18) for receiving the torque applied to said elastic member; and a load member (16) arranged separate from said torque member and for supporting a load of said elastic member; and wherein said elastic member is a cylindrical member (figure 1) , wherein said torque member is a thin part arranged in a circular-arc direction, wherein said load member is a thin part arranged in a radial direction (paragraphs 19-28, figure 1).

With respect to claims 4 and 7, Herbold teaches wherein the torque detection arrangement is mounted to at least one of the torque member and the load member (figure 1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 6, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herbold et al. US Patent Application Publication 2004/0003646 in view of Hachtel et al. US Patent 4,356,732.

With respect to claim 2, Herbold teaches an elastic member (10) arranged in a power transmission channel and deforming in response to a torque to be measured; and torque detection means (26) for detecting the torque based on deformation of said elastic member, characterized in that it comprises: a torque member (18) for receiving the torque applied to said elastic member; and a load member (16) arranged separate from said torque member, for supporting a load of said elastic member; and wherein said load member is a thin part formed in a radial direction of said small-diameter shaft part and having a direction of a surface positioned in a direction of a torsional moment (paragraphs 19-28, figure 1).

But Herbold fails to teach wherein said elastic member is a torsion-bar-type member and wherein said torque member is a small-diameter shaft part.

Hachtel teaches a torque measuring apparatus wherein discs (2 and 3) are attached to a torsion rod (10) in order to determine torque on the shaft (8).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the torque measuring apparatus as taught by Hachtel in the invention of Herbold in order easily determine the torque acting a torsion shaft.

With respect to claim 6, Herbold teaches wherein the torque detection arrangement is mounted to at least one of the torque member and the load member (figure 1).

With respect to claim 8, Herbold in view of Hachtel fails to teach wherein the torque detection arrangement is uses at least two types of torque detection

Art Unit: 2855

arrangements. However, it has shown that when there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions (i.e. using multiple types of detection arrangements), a person of ordinary skill has good reason to pursue the known options with their technical grasp. *KSR*, 127 S. Ct. at 1742, 82 USPQ2d at 1397. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use multiple torque detection arrangements in order provide a more versatile measuring apparatus.

Claims 5, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herbold et al. US Patent Application Publication 2004/0003646.

With respect to claims 5, 9, and 10, Herbold fails to teach wherein the torque detection arrangement is uses at least two types of torque detection arrangements. However, it has shown that when there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions (i.e. using multiple types of detection arrangements), a person of ordinary skill has good reason to pursue the known options with their technical grasp. *KSR*, 127 S. Ct. at 1742, 82 USPQ2d at 1397. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use multiple torque detection arrangements in order provide a more versatile measuring apparatus.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Freddie Kirkland III whose telephone number is 571-272-2232. The examiner can normally be reached on Monday through Friday 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Edward Lefkowitz/
Supervisory Patent Examiner, Art Unit 2855

/Freddie Kirkland III/
Examiner, Art Unit 2855

Application/Control Number: 10/588,173
Art Unit: 2855

Page 7